



# POLIOMYELITIS SURVEILLANCE REPORT

FOR ADMINISTRATIVE USE

REPORT NO. 196

April 25, 1960

## Table of Contents

### SUMMARY

1. CURRENT POLIOMYELITIS MORBIDITY TRENDS
2. REPORTS
3. LIVE POLIOVIRUS VACCINE PROGRAMS
4. ROUTINE POLIOMYELITIS SURVEILLANCE
  - A. Under 30-Day Vaccinated Cases
  - B. Vaccine Distribution

### SUPPLEMENT - POLIOMYELITIS IMMUNIZATION SURVEY

KANSAS CITY - WYANDOTTE COUNTY, KANSAS

January 7-12, 1960

### SUPPLEMENT - POLIOMYELITIS IMMUNIZATION SURVEY

MACON, GEORGIA

March 7-10, 1960



U. S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
Public Health Service  
Bureau of State Services  
COMMUNICABLE DISEASE CENTER  
Robert J. Anderson, Chief  
Epidemiology Branch  
Alexander D. Langmuir, Chief  
Surveillance Section  
E. Russell Alexander, Chief  
50 Seventh St., N. E.  
Atlanta 23, Georgia

### SPECIAL NOTE

This report is intended for the information and administrative use of those involved in the investigation and control of poliomyelitis and polio-like diseases. It presents a summary of provisional information reported to CDC from State Health Departments, the National Office of Vital Statistics, Virology Laboratories, Epidemic Intelligence Service Officers, and other pertinent sources. Since much of the information is preliminary in nature, confirmation and final interpretation should be determined in consultation with the original investigators prior to any further use of the material.

## SUMMARY

Poliomyelitis incidence is remaining at a low level throughout the United States.

The epidemic in Puerto Rico is still underway and appears to be caused by Type I poliovirus. A description of the current status of this outbreak is included.

The Poliomyelitis Surveillance Unit has requested brief descriptions of studies and field trials now underway or planned utilizing live poliovirus vaccine. A listing of previously reported studies is included as well as two new reports.

### 1. CURRENT POLIOMYELITIS MORBIDITY TRENDS

During the 15th week of 1960 ending April 16, a total of 13 cases, 9 paralytic, was reported to the NOVS. This represented little change from the previous week when 13 cases, 11 paralytic, were reported. (Table I)

The cumulative total for 1960 now stands at 247 cases, 175 paralytic. This is considerably less than the total reported during the first 15 weeks of 1959; 334 total, 237 paralytic. For the past two months, the weekly incidence figures have been similar to 1958; the year of lowest reporting for these months during the past 5 years.

With the exception of Puerto Rico, there have been no reports of outbreaks or concentrations of cases within the United States or Territories.

### 2. REPORTS

#### A. Puerto Rico

Dr. Rafael Timothee, Chief, Bureau of Communicable Disease Control, Puerto Rico Department of Health, has submitted reports of 64 cases of poliomyelitis from January 1 through April 20. Of these 64 cases, 63 are paralytic and there have been 3 fatalities. This represents an increase of 26 paralytic cases since PSU Report No. 195, April 4.

The histogram in Figure 2A presents these 64 cases by week of onset. The greatest number of cases have occurred during the week ending March 26.

Cases have been reported from 23 of the 75 municipalities in Puerto Rico. The majority of the cases however, are residents of the southern part of the island where the largest concentration of cases has been reported from the municipality of Ponce, a city of 120,000. In Ponce, 24 cases have been reported, the maximum number having had onsets during the week ending March 26. Only 5 cases have had onset in April thus far.

With the exception of Yauco and San Juan, there have been no other concentrations of greater than 3 cases. In Yauco, a municipality of 10,000 near Ponce, 6 cases have been reported. Only 5 cases have been reported from the capital city of San Juan, the largest population concentration on the island.

The paralytic cases are listed by age and vaccination status in Table 2A. There is a predominance of cases among pre-school children; 84.1 per cent under 5 years and 63.5 per cent under 3 years of age. Only 3 cases, 4.8 per cent have received 3 or more vaccinations.

Dr. Andrew Fodor, Chief, Virus Diagnostic Unit, Communicable Disease Center, Chamblee, Georgia, reported that agents have been isolated from 4 of 6 stool specimens submitted from Puerto Rican cases. Presumptive tests suggest the identify of these agents to be Poliovirus Type I.

Dr. Timothee stated that vaccination programs are presently underway with particularly intense programs in Ponce and the surrounding municipalities. He reports that the response to these programs has been very enthusiastic.

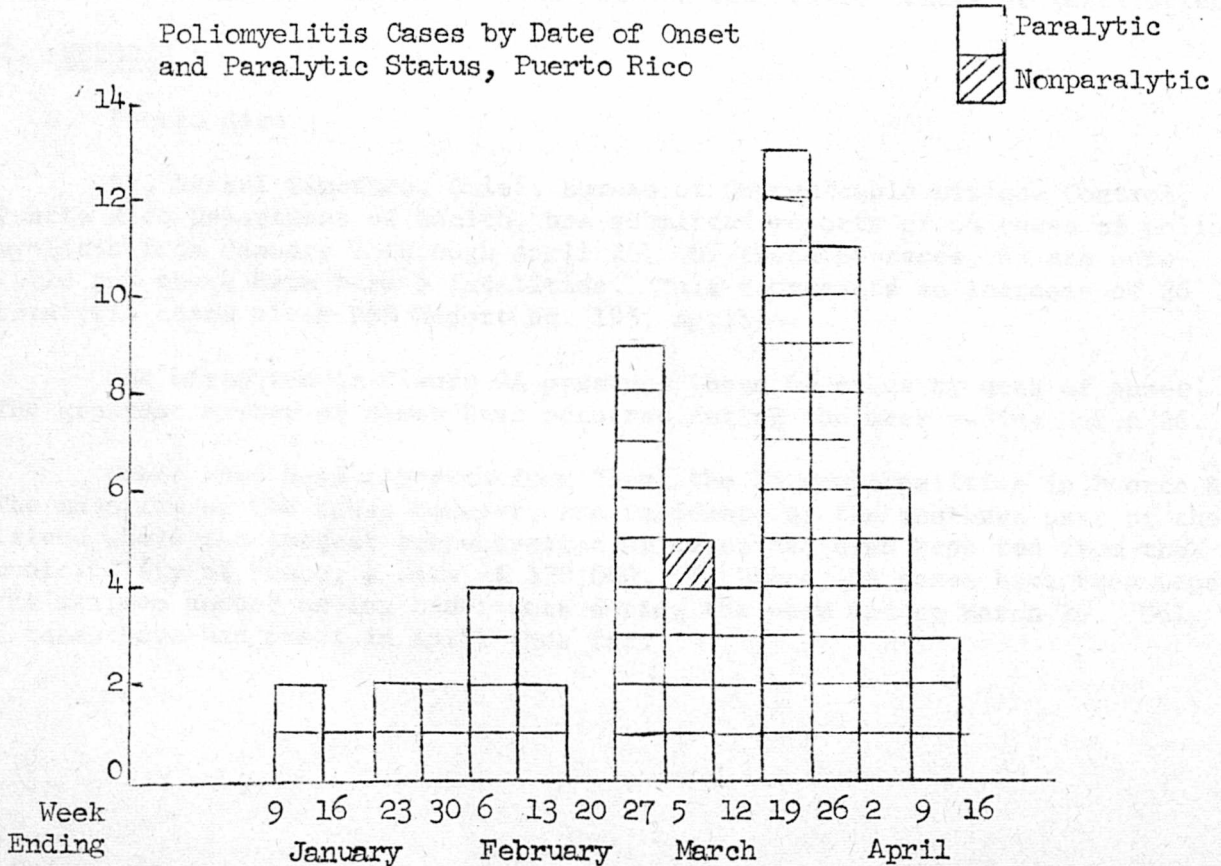
Subsequent reports on this Puerto Rican outbreak will appear in forthcoming Poliomyelitis Surveillance Unit Bulletins.

Table 2A

PARALYTIC POLIOMYELITIS BY AGE GROUP  
AND VACCINATION STATUS, PUERTO RICO  
(through April 20, 1960)

Age	Doses of Vaccine					Total
	0	1	2	3+	Unk	
<1	8					8
1	20		1			21
2	9		2			11
3	7	2	1			10
4	2			1		3
5-9	4	1	1	1		7
10-14	1			1		2
15-19						
20+	1					1
Total	52	3	5	3		63

Figure 2A





## B. Poliomyelitis in Pan America

The following table was abstracted from the Weekly Epidemiological Report of the Pan American Sanitary Bureau, Volume XXXII, No. 16, April 20, 1960.

<u>Country</u>	<u>Latest Reported Period</u>	<u>Number of Cases</u>	
		<u>Cumulative 1959</u>	<u>Total 1960</u>
a) Carribean			
Cuba	3/19-3/25	58	9
Haiti	3/1-3/7	32	17
Jamaica	3/27-4/2	2	7
Puerto Rico	3/27-4/2	3	26
Trinidad and Tobago	2/28-3/5	-	7
b) Central America			
Costa Rica	3/27-4/2	8*	5*
Guatemala	1/1-1/31	5	12
Honduras	1/1-1/31	0	6
Mexico	2/21-2/27	104	66
Nicaragua	3/27-4/2	2	85
Panama	1/14-1/20	0	10
c) South America			
Venezuela	3/20-3/26	93	86
Columbia	3/14-3/20	19	39

\*Incomplete

## 3. LIVE POLIOVIRUS VACCINE PROGRAMS

In PSU Reports Nos. 194 and 195, listings and brief descriptions were published of some of the studies now underway or planned utilizing live poliovirus vaccine. Below are listings of all reports received to date. Both domestic and foreign reports will be listed in PSU Reports as information becomes available.

### A. Programs Previously Reported

#### 1. Sabin Strains

E. New York City, New York (Dr. Saul Krugman, Associate Professor of Pediatrics, New York University College of Physicians)  
A study of both monovalent and trivalent vaccines in new born infants.

### B. Newly Reported Programs

#### 1. Nashville, Tennessee

The following data have been extracted from a report furnished by Dr. Saul Krugman, Associate Professor of Pediatrics, New York University College of Physicians.

In this study different groups of infants are being immunized at 6 weeks, 12 weeks and 18 weeks of age. Also included is a comparison of the effect of administering the 3 types separately and as a mixture given once and more than once. To date approximately 50 infants have been immunized and there have been no reactions. Stool collections are being made on immunized children and their families during the course of the study.

## 2. Cincinnati, Ohio

In a preliminary communication from Dr. Albert B. Sabin, University of Cincinnati School of Medicine, it is reported that a field trial on the use of Sabin strains of live poliovirus vaccine will be conducted in Cincinnati, starting April 24th. The vaccine will be offered to the total pre-school population of the city, aged 3 months to 6 years. (60,000 children) The administration of Type I vaccine will be limited to the period April 24th to May 1st. Type III and Type II vaccines will be given in subsequent monthly intervals, each over a one week administration period. The vaccine will be administered in health clinics and stations, as well as by private practitioners.

The associated laboratory investigations will include a study of the enteric viral flora in various socioeconomic groups of the city, as well as antibody conversion rates among children in these groups.

The study is under the sponsorship of the University of Cincinnati School of Medicine, the Cincinnati Health Department, the Cincinnati Pediatric Society, the Southwest Ohio Society of General Practitioners, and the Academy of Medicine of Cincinnati.

## 4. ROUTINE POLIOMYELITIS SURVEILLANCE - 1960

### A. Cases with onset within 30 days of vaccination

There has been one under 30-day case reported to the Polio Surveillance Unit during the first three months in 1960. This paralytic case, in which Type III poliovirus has been isolated, is a 6 month female from East Baton Rouge Parish, Louisiana. Vaccination was received on 2-3-60 in the left arm with onset of paralysis on 2-4-60 in the left leg. The vaccine used was Lilly 8043-746989.

### B. Vaccine Distribution

A summary of current and cumulative data concerning vaccine released, shipped and inventoried is presented in Table II. Also included are releases and shipments of quadruple antigen.

ERRATA: In PSU Report No. 195, April 11, 1960, in the section on Live Poliovirus Vaccine Programs, line 5, page 8 should read: "2. Cox Strains", instead of "2. Cocksackie Strains".

(This report was prepared by the Poliomyelitis and Polio-Like Diseases Surveillance Unit, Harold W. Wylie, Jr., M.D., Chief, Joseph Oren, M.D., and Mr. Leo Morris, Statistician, with the assistance of the Statistics Section, CDC.)

Figure 1. CURRENT U.S. POLIO INCIDENCE  
compared with years 1956 through 1959

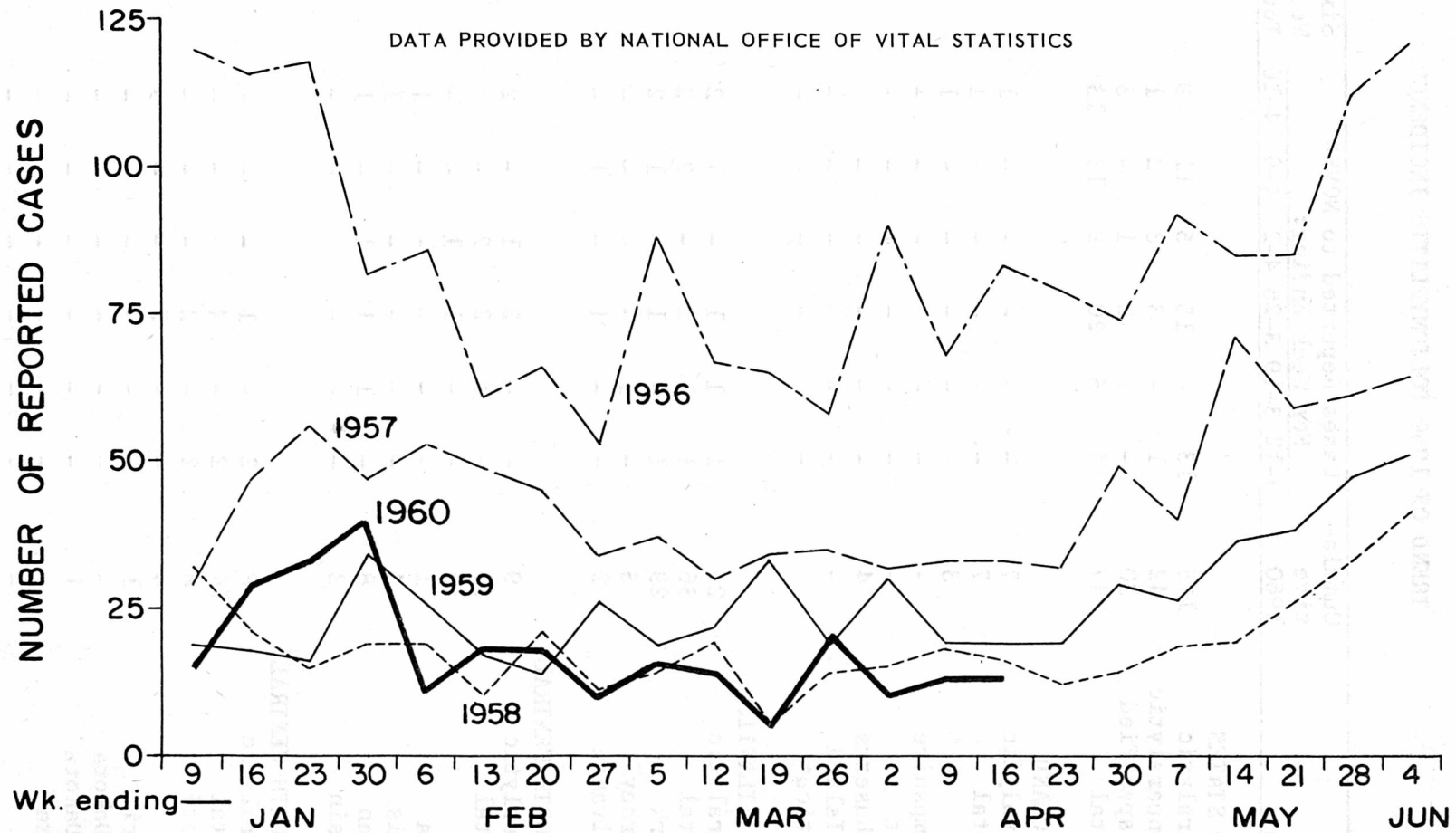


Table I

## TREND OF 1960 POLIOMYELITIS INCIDENCE

State and Region	Cumula- tive 1960	Cases Reported to NOVS* For Week Ending:						Six Week Total	Comparable Six Weeks Totals in		
		3-12	3-19	3-26	4-2	4-9	4-16		1959	1958	1957
UNITED STATES											
Paralytic	175	13	4	15	5	11	9	57	99	44	95
Nonparalytic	42	1	-	3	3	2	1	10	27	23	73
Unspecified	30	-	1	2	1	-	3	7	16	20	30
Total	247	14	5	20	9	13	13	74	142	87	198
NEW ENGLAND											
Paralytic	7	-	-	-	-	-	1	1	3	2	-
Total	7	-	-	-	-	-	1	1	4	3	2
Maine	3	-	-	-	-	-	1	1	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	4	-	-	-	-	-	-	-	3	-	1
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	1	3	1
MIDDLE ATLANTIC											
Paralytic	25	1	1	1	-	1	2	6	6	-	2
Total	36	1	1	2	-	2	2	8	8	1	7
New York	29	1	-	1	-	1	2	5	8	1	5
New Jersey	5	-	1	-	-	-	-	1	-	-	-
Pennsylvania	2	-	-	1	-	1	-	2	-	-	2
EAST NORTH CENTRAL											
Paralytic	9	-	-	2	1	-	2	5	5	1	5
Total	30	-	1	2	2	-	3	8	11	9	18
Ohio	15	-	-	1	1	-	-	2	6	2	2
Indiana	1	-	-	-	-	-	1	1	1	1	8
Illinois	4	-	-	-	-	-	1	1	1	1	-
Michigan	8	-	1	1	1	-	1	4	2	4	6
Wisconsin	2	-	-	-	-	-	-	-	1	1	2
WEST NORTH CENTRAL											
Paralytic	8	2	-	1	-	-	-	3	9	3	4
Total	14	2	-	4	-	-	-	6	17	5	18
Minnesota	8	2	-	2	-	-	-	4	-	-	1
Iowa	4	-	-	2	-	-	-	2	-	-	1
Missouri	1	-	-	-	-	-	-	-	16	1	5
North Dakota	-	-	-	-	-	-	-	-	-	1	-
South Dakota	1	-	-	-	-	-	-	-	1	2	-
Nebraska	-	-	-	-	-	-	-	-	-	1	9
Kansas	-	-	-	-	-	-	-	-	-	-	2

\*National Office of Vital Statistics: weekly figures reported by the States as of Wednesday of the specified week; cumulative figures include revisions and corrections.



Table I (Continued)

State and Region	Cumula- tive 1960	Cases Reported to NOVS* For Week Ending:						Six Week Total	Comparable Six Weeks Totals in		
		3-12	3-19	3-26	4-2	4-9	4-16		1959	1958	1957
SOUTH ATLANTIC											
Paralytic	35	2	-	3	2	2	-	9	24	11	11
Total	44	3	-	3	2	2	-	10	31	17	26
Delaware	1	-	-	-	-	-	-	-	1	1	1
Maryland	1	1	-	-	-	-	-	1	-	-	-
D. C.	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	1	5
West Virginia	3	-	-	-	1	-	-	1	2	1	1
North Carolina	13	-	-	-	-	1	-	1	5	2	4
South Carolina	2	-	-	-	-	-	-	-	2	1	2
Georgia	2	-	-	1	-	-	-	1	2	2	7
Florida	22	2	-	2	1	1	-	6	19	9	6
EAST SOUTH CENTRAL											
Paralytic	7	3	-	1	-	-	-	4	5	2	14
Total	8	3	-	1	-	-	-	4	11	4	17
Kentucky	6	2	-	1	-	-	-	3	2	-	-
Tennessee	-	-	-	-	-	-	-	-	5	2	6
Alabama	1	1	-	-	-	-	-	1	-	1	5
Mississippi	1	-	-	-	-	-	-	-	4	1	6
WEST SOUTH CENTRAL											
Paralytic	16	-	-	1	-	6	1	8	26	11	32
Total	21	-	-	1	1	6	1	9	31	18	49
Arkansas	3	-	-	-	-	-	-	-	5	1	2
Louisiana	5	-	-	1	-	-	-	1	8	1	13
Oklahoma	1	-	-	-	-	-	-	-	-	3	2
Texas	12	-	-	-	1	6	1	8	18	13	32
MOUNTAIN											
Paralytic	8	-	1	-	-	1	-	2	4	5	3
Total	14	-	1	-	-	1	2	4	8	9	11
Montana	4	-	-	-	-	-	NR	-	-	1	-
Idaho	4	-	-	-	-	-	-	-	-	-	-
Wyoming	1	-	-	-	-	-	1	1	1	1	-
Colorado	1	-	-	-	-	1	-	1	2	4	3
New Mexico	1	-	-	-	-	-	1	1	1	2	-
Arizona	2	-	-	-	-	-	-	-	2	-	5
Utah	1	-	1	-	-	-	-	1	2	-	3
Nevada	-	-	-	-	-	-	-	-	-	1	-
PACIFIC											
Paralytic	60	5	2	6	2	1	3	19	17	9	24
Total	73	5	2	7	4	2	4	24	21	21	50
Alaska	-	-	-	-	-	-	-	-	-	-	1
Washington	6	-	-	2	-	-	-	2	2	4	2
Oregon	12	1	2	-	1	-	1	5	-	1	5
California	54	4	-	5	3	2	3	17	19	16	42
Hawaii	1	-	-	-	-	-	-	-	-	-	-
Puerto Rico	46	6	4	3	1	31	NR	45	-	5	-

Table II

## POLIOMYELITIS AND QUADRUPLE ANTIGEN VACCINE REPORTS\*

(Data provided by the Polio Vaccine Activity, BSS, USPHS through April 15, 1960)

## POLIOMYELITIS VACCINE SHIPPED (1000's cc's)

Period	National Foundation	Public Agencies	Commercial Channels	Export	Total
1955	13,541	7,893	6,223	-	27,667
1956	194	45,588	24,784	6,477	77,043
1957	154	50,026	38,062	12,784	101,026
1958	203	18,533	28,319	33,571	80,626
1959	160	26,160	37,553	21,161	85,034
1960					
Jan-March	-	4,298	5,371	2,782	12,451
<u>Week Ending</u>					
4-8	-	489	691	249	1,429
Total to date	-	4,787	6,062	3,031	13,880
Cumulative					
Total	14,252	152,987	141,003	77,024	385,266

\*Excludes amounts of outdated unshipped vaccine.

## QUADRUPLE ANTIGEN VACCINE SHIPPED (in cc's)

Period	Public Agencies	Commercial Channels	Export	Total
1959	157,251	4,019,577	59,143	4,235,971
1960				
Jan-March	117,915	1,307,923	64,700	1,490,538
<u>Week Ending</u>				
4-8	8,221	119,448	-	127,669
Total to date	126,136	1,427,371	64,700	1,618,207
Cumulative				
Total	283,387	5,446,948	123,843	5,854,178

## POLIOMYELITIS IMMUNIZATION SURVEY

Kansas City - Wyandotte County, Kansas

January 7-12, 1960

Dr. N.C. Walker, Director, Kansas City-Wyandotte County Health Department

A survey (based on the CDC Quota Sampling Procedures) to determine the extent of poliomyelitis immunizations was carried out in Wyandotte County with consultation and assistance by Mr. Elmer C. Hall, Communicable Disease Center, and Mr. Al F. Schaplowsky, Director, Health Education Services, Kansas State Board of Health.

The county was divided into five broad socioeconomic areas; upper, middle, and lower white, nonwhite, and "county". The first four areas are subpopulations of Kansas City, Kansas. The fifth area, designated as "county", refers to the remainder of Wyandotte County excluding Kansas City. A total of 640 household visits were scheduled of which 602 were completed.

In the preschool children (1-4 years) the proportions with three or more inoculations are all relatively high with the exceptions of the nonwhite population. Even in the nonwhite population only 14 percent had received no inoculations. It is noteworthy that children of school age (5-14 years) have high levels of immunization in all areas of the city and county. In the 15-39 age group the proportions with three or more inoculations follows a socioeconomic pattern. The upper white population has the highest level with 60 percent immunized, middle white 43 percent, lower white 37 percent and nonwhite 25 percent. The county area falls between the upper and middle white populations with 54 percent immunized with three or more inoculations. The proportions with four or more inoculations are relatively low in all age economic groups.

The following table provides a summary of the poliomyelitis immunization status in Wyandotte County by age and socioeconomic area.

Table 1

Poliomyelitis Inoculations by Race, Age, and Economic Area  
Wyandotte County, Kansas, January, 1960

Age Group	Economic Area	Total Persons	Number of Inoculations					Percent With		
			0	1-2	3	4	Unk.	None	3 or More	4 or More
Under 1	Upper White	0	-	-	-	-	-	-	-	-
	Middle White	11	8	3	-	-	-	73	-	-
	Lower White	10	7	1	2	-	-	70	20	-
	Nonwhite	18	14	3	1	-	-	78	6	-
	County	9	5	2	2	-	-	56	22	-
1-4	Upper White	12	-	3	6	2	1	0	67	17
	Middle White	54	3	13	21	16	1	6	69	30
	Lower White	44	4	8	22	10	-	9	73	23
	Nonwhite	64	9	33	17	5	-	14	34	8
	County	77	6	16	32	23	-	8	71	30
5-14	Upper White	42	-	4	16	22	-	0	90	52
	Middle White	81	5	8	36	31	1	6	83	38
	Lower White	74	1	3	52	18	-	1	95	24
	Nonwhite	128	9	25	61	27	6	7	70	21
	County	176	9	10	78	79	-	5	89	45
15-39	Upper White	53	9	10	16	16	2	17	60	30
	Middle White	123	48	15	39	12	9	40	43	10
	Lower White	109	48	18	33	6	4	45	37	6
	Nonwhite	153	75	25	27	9	17	52	25	6
	County	227	66	33	85	35	8	30	54	16
40 and Over	Upper White	110	93	6	9	-	2	85	8	0
	Middle White	138	123	2	7	2	4	92	7	1
	Lower White	111	101	2	6	2	-	91	7	2
	Nonwhite	183	157	2	8	1	15	91	5	1
	County	181	157	5	10	4	5	88	8	2

A copy of the complete Kansas City - Wyandotte County, Kansas report may be obtained by request addressed to:

Statistics Section, Epidemiology Branch

Communicable Disease Center

50 Seventh St. N.E.

Atlanta 23, Ga.



## POLIOMYELITIS IMMUNIZATION SURVEY

Macon, Georgia March 7-10, 1960

Dr. Robert J. Walker, Jr., District Health Director  
Bibb, Twiggs and Jones Counties

A survey of the poliomyelitis and diphtheria immunization levels, based on the CDC Quota Sampling Procedures was held in Macon with consultation and assistance by Dr. Theodore Doege, Mrs. Ida L. Sherman and Mr. Leo Morris, Communicable Disease Center, Atlanta, Georgia.

The population of Macon was divided into four subpopulation groups: upper, middle and lower white socioeconomic groups, and the Negro geographic area. A total of 688 household visits were scheduled of which 618 were completed. The pattern of poliomyelitis immunization followed that found recently in many urban communities: higher levels of immunization in all age groups in the upper socioeconomic group; relatively low levels in the preschool age group of all the population strata except for the upper group.

The levels of diphtheria immunization in children under 15 years of age were somewhat higher than the proportions with three or more poliomyelitis inoculations. This is attributed to the intensified diphtheria immunization campaign instituted following an outbreak of the disease during the autumn months of last year.

The following table provides a summary of the poliomyelitis immunization status in Macon by socioeconomic groupings by age.

Table 1. Poliomyelitis Vaccination Status by Area by Age Groups

Age Group	Area	Total Persons	Number of Inoculations						Vaccinated		Zero	
			0	1	2	3	4+	Unk.	No.	%	No.	%
<hr/>												
<u>2 or more</u>												
< 2 yrs (exclud- ing in- fants < 3 mo.)	Upper White	9	-	-	2	7	-	-	9	*	0	*
	Middle White	6	3	-	2	1	-	-	3	*	3	*
	Lower White	9	4	-	3	1	-	1	4	*	4	*
	Negro	42	23	4	5	7	-	3	12	28.6	23	54.8
<u>3 or more</u>												
2-4	Upper White	29	1	-	-	16	12	-	28	96.6	1	3.4
	Middle White	15	-	2	4	6	3	-	9	60.0	0	0
	Lower White	23	3	-	6	13	1	-	14	60.9	3	13.0
	Negro	106	45	11	21	25	-	4	25	23.6	45	42.5
5-14	Upper White	117	2	1	-	33	80	1	113	96.6	2	1.7
	Middle White	48	4	-	2	33	9	-	42	87.5	4	8.3
	Lower White	95	7	5	15	57	9	2	66	69.5	7	7.4
	Negro	334	66	32	72	127	9	28	136	40.7	66	19.8
15-39	Upper White	131	32	5	12	46	34	2	80	61.1	32	24.4
	Middle White	89	52	2	10	19	3	3	22	24.7	52	58.4
	Lower White	113	58	2	17	30	3	3	33	29.2	58	51.3
	Negro	306	168	13	36	49	1	39	50	16.3	168	54.9
40 and Over	Upper White	154	128	2	3	14	4	3	18	11.7	128	83.1
	Middle White	174	168	-	-	4	-	2	4	2.3	168	96.6
	Lower White	148	141	-	-	3	-	4	3	2.0	141	95.3
	Negro	295	269	1	3	5	1	16	6	2.0	269	91.2

A copy of the complete Macon, Georgia report showing additional results with respect to diphtheria may be obtained by request addressed to:

Statistics Section, Epidemiology Branch  
Communicable Disease Center  
50 Seventh St. N.E.  
Atlanta 23, Ga.